

# AFYADATA: A SET OF DIGITAL TOOLS TO ENHANCE DISEASE SURVEILLANCE IN HUMAN AND ANIMAL

#### POPULATIONS

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#### Background

- It is well recognized that a well-functioning surveillance system requires timely availability of relevant data to make informed decision for effective prevention and control of diseases
- Existing surveillance systems have not been able to capture adequately health events of human and animal at community level

### Objective

□ To empower communitybased human and animal health reporters with training and information and communication technology (ICT)-based solutions to contribute to disease detection and response.

#### Approach

# AfyaData features

- A set of two apps; a native mobile Android-based client and a Web-based app acting as a server.
- □Can capture georeferenced data and picture in areas with or without network, then access location with network to submit data
- It supports multiple languages and prompt analysis and visualization of data
- □It can integrate data from multiple sources
- □ It is enhanced with an early warning short message service for notification to decision makers on health events through their mobile phones
- The app is powered by One Health Knowledge Repository (OHKR), a database of expertly authored health contents, programmed to receive data from CHRs and detects the most likely disease conditions

## **Model deployment**

- The surveillance model has been deployed in 11 districts in Tanzania
- □The population in the country which is under active surveillance using *AfyaData* includes humans (1,971,611), goats (429, 297), chicken (403,888), cattle (388, 440, sheep (348,137) and pigs (11,087)
- The collected data are accessed in near to real-time by all relevant authorities through specific access code

Number of cases reported by CHRs in Ngorongoro and Morogoro from August 2016 to December 2017



- Epihack conducted in Tanzania in 2014 with 66 stakeholders from 14 countries, followed by inception workshop with 54 stakeholders from 11 countries conducted in Tanzania in 2015
- Participants (developers, human and animal health sectors and community members) designed a One Health model to engage Community Health Reporters (CHRs) in community-based participatory disease surveillance



#### **Lessons learnt**

- Improved engagement of community in syndromic disease surveillance
- Early detection and timely submission of health data
- Linkage of health events from community to formal surveillance systems
- Improved two-way communication feedback loops
- Enhanced contact tracing of health events
- Improved case management and disease outbreak control
- Realized the value and impact of networking between different stakeholders

#### Theory of Change









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